

Attorney Docket No.: J3678(C)
Serial No.: 10/520,394
Filed: January 4, 2005
Confirmation No.: 5147

REMARKS

Claims 1 and 19 have been amended to specify that the xanthine component comprises a substituted xanthine and to incorporate the formula for the substituted xanthine of claim 4. Claim 4 has been amended to improve its readability by moving the formula of the substituted xanthine to the initial description of component (ii). Claims 1 and 4 have been amended to clarify that the described composition is applied to increase the high humidity style retention of hair. Claims 1 and 4 have been further amended to identify component i) as an alpha-hydroxy acid that is citric acid, tartaric acid, their salts or mixtures thereof. Additionally, claim 1 has been amended to incorporate the ratio and weight percent requirements of claims 17 and 18. Claim 17 has been amended to change its dependency from claim 1 to claim 4. Claim 5 has been amended to follow the nomenclature of claim 1 with respect to its description of the xanthine (ii). Claims 2, 3, 7, 8 and 18 have been cancelled without prejudice. New claim 21 specifies that that the composition is also applied to decrease the volume of hair and/or to lengthen the hair. Entry of the subject amendments is respectfully requested.

Pursuant to the Office Action of May 11, 2009, claims 1-12 and 16-20 were rejected under 35 U.S.C. § 103(a) as obvious over Barton et al. (WO96/10387) in view of Moeller et al. (US4833147). These rejections are respectfully traversed.

The subject invention is directed to a method of treating hair to increase the high humidity style retention of the hair by application to the hair of a particular leave on hair treatment composition that includes a substituted xanthine and an alpha hydroxy acid component (in particular, citric acid, tartaric acid, their salts or mixtures thereof) in a total amount of from 2 to 5 wt%. As required by claims 1 and 19, the ratio of the alpha-hydroxy acid component to xanthine component is from 1:3 to 3:1;

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in claim 4 the ratio of the alpha-hydroxy acid component to xanthine component is from 1:0.01 to 0.01:1. The subject combination of xanthine component and alpha hydroxy acid component has been found to synergistically improve high humidity style retention, as demonstrated by the data provided at page 24 of the subject application. The page 24 data reports that a styling composition comprising **5 wt% caffeine or 5 wt% citric acid** had curl drop out values of 45.8% and 37.5% respectively, and that a styling composition comprising caffeine or 1 wt% citric acid had curl drop out values of 48% or 49%. See Examples C through F. The negative control (water) had a curl drop out value of 64%, and the positive control (a commercial hairspray) had a curl drop out value of 45.4%. **In contrast, Example 3, which contained 1 wt% each of citric acid and caffeine had a curl drop out value of 35%.** Thus, citric acid and caffeine at a level of **2 wt% combined** outperformed Example D (caffeine at 5%) and was slightly better than Example F (citric acid at 5%), **at a substantially reduced level of total active.** It is respectfully submitted that the improvement in high humidity hold provided by the claimed combination of xanthine component and alpha-hydroxy acid component is both surprising and unexpected.

Barton et al. is directed to a hair stimulant composition that includes a hair growth stimulating agent that can but need not be a xanthine such as theophylline (i.e., a substituted xanthine) or a derivative thereof, such as methyl silanol theophylline acetate alginate. There is nothing in the citation that discloses or suggests the use of a substituted xanthine in combination with an alpha-hydroxy acid, nor is there anything that discloses or suggests the use of a substituted as a means of improving high humidity hold.

The hair growth discussed in Barton is not "hair lengthening" within the meaning of the subject application. In the experimental methodology of the subject

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application, "lengthening" is measured on specimens that have been treated with a test composition, combed, and allowed to dry under specified conditions of temperature and humidity. The length of the treated specimen is compared to that of samples treated with a control (water or a conditioning composition) and subjected to similar test conditions. Thus, "lengthening" is a relative measure of the extent to which a test specimen stays straight (samples that exhibit greater "frizzing" or kinking will appear shorter) it is not a measure **of hair growth**.

Moeller et al. is directed to the combined use of a 4-alkoxy- or 4-(4-alkylbenzyloxy)-benzoic acid and a selected purine compound (including, for example, theophylline, theobromine or caffeine) as sebo-suppressive agents to normalize secretion of oil from the sebaceous glands. There is nothing that discloses or suggests the claimed combination of xanthine composition and alpha-hydroxy acid as a means of treating hair to improve high humidity hold or to "lengthen" hair or to reduce frizziness. Nor is there any suggestion of the synergistic improvement in high humidity hold offered by the claimed combination of xanthine composition and alpha-hydroxy acid. The only disclosure in Moeller et al. of a formulation that includes a combination of xanthine composition and alpha-hydroxy acid is formulation 3.2, which contains 1.0 weight percent of citric acid and 0.2 weight percent of theobromine. Formulation 3.2 fails to satisfy the claimed requirements of a combined xanthine composition and alpha-hydroxy acid content of from 2 to 5 wt%, and is also outside the claimed ratio requirements of claims 1, 17, and 19, as well as the claims depending directly or indirectly from same.

In short, it is respectfully submitted that there is nothing in either Moeller et al. or Barton et al., alone or in combination, which could reasonably be construed as teaching or suggesting the claimed combination of xanthine composition and alpha-

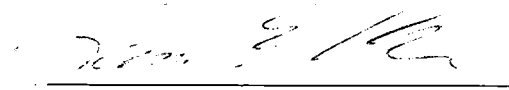
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hydroxy acid as a means of improving style retention under conditions of high humidity.

In view of the foregoing amendments and remarks, reconsideration and allowance of the subject claims is respectfully requested.

If a telephone conversation would be of assistance in advancing the prosecution of the present application, applicants' undersigned attorney invites the Examiner to telephone at the number provided.

Respectfully submitted,



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